Bioelectrochemistry and Bioenergetics, 24 (1990) 379
A Section of *J. Electroanal. Chem*, and constituting Vol. 299 (1990)
Elsevier Sequoia S.A., Lausanne

Author index

Ahmed, Z.A. 165
Asencor, F.J. 203
Azzouz, N. 13

Bara, M. 361
Bizouarn, T. 215
Blank, M. 51

Caballero, M. 33
Chang, H.-C. 347
Cherepanov, D.A. 113
Colom, K. 203
Cymbalyuk, E.S. 313

De Kouchkovsky, Y. 215
Dittrich, J. 231
Doll, L. 129, 323
Domínguez, A. 203
Dong, S. 23
Drain, C.M. 263

El-Maali, N.A. 155

Galkin, V.L. 143
Goyal, R.N. 355
Guiet-Bara, A 361

Haraux, F. 215
Hassan, R.M. 155
Heiduschka, P. 231

Ibrahim, M.S. 165
Iglesias, F.J. 203
Ikeda, T. 193, 365

Jyothi, G. 297

Kamal, M.M. 165, 179
Kano, K. 193
Karyakin, A.A. 257
Kell, D.B. 83
Kinoshita, H. 365
Kosevich, A.M. 143
Krishnamoorthy, G. 297
Krishtalik, L.I. 113, 335
Kubota, T. 193
Kulys, J. 305
Kuwabata, S. 241

Lecompte, M.F. 13
Limaye, N.M. 249

Mathur, N.C. 355
Matsue, T. 347
Mauzerall, D. 263
Michaelson, S.M. 371
Miller, I.R. 129, 323
Mitra, C.K. 297
Mori, K. 193
Mouneimne, Y. 33

Panova, I. 41
Phung-Nhu-Hung, S. 215
Putinas, J. 371

Rajeshwari, 355
Reynaud, J.A. 33
Rols, M.P. 101
Ryabov, A.D. 257

Sabelnikov, A.G. 313
Santamaria, C. 203
Santhanam, K.S.V. 249
Schmid, R.D. 305
Senda, M. 193, 365
Soo, L. 51
Strahilov, D. 41
Sugimura, K. 241

Teissié, J. 101
Temerk, Y.M. 165, 179
Tien, H.T. 1
Tomov, T. 41
Tsoneva, I. 41
Tsong, T.Y. 271
Tyapochkin, E.M. 257

Uchida, I. 347
Uno, B. 193
Usui, T. 365

Valenta, P. 179
Varfolomeev, S.D. 257
Voinova, M.V. 143

Wardak, A. 1
Woodward, A.M. 83

Yamada, H. 347
Yoneyama, H. 241

Zhu, Y. 23

Bioelectrochemistry and Bioenergetics, 24 (1990) 380–384
A Section of *J. Electroanal. Chem*, and constituting Vol. 299 (1990)
Elsevier Sequoia S.A., Lausanne

Subject index

Acid dissociation constants
Voltammetric determination of acid dissociation constants of pyrroloquinoline quinone and its reduced form under acidic conditions (Kano et al.) 193
Adenosine
Adsorption and association of adenosine dinucleotides at charged interfaces (Temerk et al.) 179
ADP
Ionic composition of the medium, surface potential and affinity of the membrane-bound chloroplast ATPase for its charged substrate ADP (Bizouarn et al.) 215
Affinity
Ionic composition of the medium, surface potential and affinity of the membrane-bound chloroplast ATPase for its charged substrate ADP (Bizouarn et al.) 215
Alamethicin
Adsorption of alamethicin and melittin on bare and phospholipid covered mercury electrodes (Miller, Doll) 129
Release of ions from large unilamellar vesicles by alamethicin and by melittin (Miller, Doll) 323
Alternating electric field
Comparison between the behaviour of yeast and bacteria in a non-uniform alternating electric field (Asencor et al.) 203
Amperometric enzyme electrode
α-Amylase assay in human serum using a mediated amperometric enzyme electrode based on oligosaccharide dehydrogenase (Kinoshita et al.) 365
Amylase
α-Amylase assay in human serum using a mediated amperometric enzyme electrode based on oligosaccharide dehydrogenase (Kinoshita et al.) 365
Anti-inflammatory drugs
Electrooxidation and determination of the anti-inflammatory drugs Piroxicam and Tenoxicam at the carbon paste electrode (El-Maali, Hassan) 155
Arthromyces ramosus
Mediatorless peroxidase electrode and preparation of bienzyme sensors (Kulys, Schmid) 305
Association
Adsorption and association of adenosine dinucleotides at charged interfaces (Temerk et al.) 179
Comparative studies on the adsorption and the association of thymine and thymidine at the charged interface (Kamal et al.) 165
ATP
Analysis of the energetics of ATP synthesis (Krishtalik) 335
Ion activation of the Na,K-ATPase in alternating currents (Blank, Soo) 51
On the nonlinear dielectric properties of biological systems. *Saccharomyces cerevisiae* (Woodward, Kell) 83

Bacillus stearothermophilus
Electrooxidation of NADH with $Co(phen)_3^{3+}$ by NADH dehydrogenase purified from *Bacillus stearothermophilus* (Matsue et al.) 347
Bacteria
Comparison between the behaviour of yeast and bacteria in a non-uniform alternating electric field (Asencor et al.) 203
Bienzyme sensors
Mediatorless peroxidase electrode and preparation of bienzyme sensors (Kulys, Schmid) 305
Bifunctional dye
Rapid oxidation and reduction of hemoglobin at a bifunctional dye of Janus Green modified electrode (Zhu, Dong) 23
Bilayer lipid membranes
Cyclic voltammetry studies of bilayer lipid membranes deposited on platinum by self assembly (Wardak, Tien) 1

Bioluminescence
Oscillatory bioluminescence of *Lampito mauritii* coelomocytes in pulsed dc electrolysis: oxygen controlled excited state production (Limaye, Santhanam) 249

Carbon
Electrooxidation and determination of the anti-inflammatory drugs Piroxicam and Tenoxicam at the carbon paste electrode (El-Maali, Hassan) 155
Carbon dioxide
Electrochemical fixation of carbon dioxide in pyruvic acid to yield malic acid using malic enzyme as an electrocatalyst (Sugimura et al.) 241
Cell membranes
On electroporation of cell membranes and some related phenomena (Review) (Tsong) 271
Centrifugal fields
A comparison between fusion of rat hepatocytes induced by electric and by centrifugal fields (Reynaud et al.) 33
Charged interfaces
Adsorption and association of adenosine dinucleotides at charged interfaces (Temerk et al.) 179
Comparative studies on the adsorption and the association of thymine and thymidine at the charged interface (Kamal et al.) 165
Charge sensitive ion conductor
An example of a working molecular charge sensitive ion conductor (Drain, Mauzerall) 263
Chloroplast ATPase
Ionic composition of the medium, surface potential and affinity of the membrane-bound chloroplast ATPase for its charged substrate ADP (Bizouarn et al.) 215
Coelomocytes
Oscillatory bioluminescence of *Lampito mauritii* coelomocytes in pulsed dc electrolysis: oxygen controlled excited state production (Limaye, Santhanam) 249
$Co(phen)_3^{3+}$
Electrooxidation of NADH with $Co(phen)_3^{3+}$ by NADH dehydrogenase purified from *Bacillus stearothermophilus* (Matsue et al.) 347
Cyclodextrin
Ferrocenes inside cyclodextrin cavities do not mediate the electron tranport between glucose oxidase and an electrode (Ryabov et al.) 257

Dielectric properties
On the nonlinear dielectric properties of biological systems. *Saccharomyces cerevisiae* (Woodward, Kell) 83
Dissociation constants
Voltammetric determination of acid dissociation constants of pyrroloquinoline quinone and its reduced form under acidic conditions (Kano et al.) 193
DNA clotting
Clotting of donor DNA during electroporation of prokaryotes (Sabelnikov, Cymbalyuk) 313

Electroporation
Clotting of donor DNA during electroporation of prokaryotes (Sabelnikov, Cymbalyuk) 313
On electroporation of cell membranes and some related phenomena (Review) (Tsong) 271
Enzymes
Electrochemical fixation of carbon dioxide in pyruvic acid to yield malic acid using malic enzyme as an electrocatalyst (Sugimura et al.) 241
Electrochemical investigation of enzyme catalysed hydrolysis and synthesis of peptides using peptidyl-4-nitroanilides as substrates (Heiduschka, Dittrich) 231
Epithelial cells
Evidence of a Na–H antiport and of Na–K–Cl cotransport in the membrane of human amniotic epithelial cells (Bara, Guiet-Bara) 361
Erythrocytes
Ion activation of the Na,K-ATPase in alternating currents (Blank, Soo) 51

Ferrocenes
Ferrocenes inside cyclodextrin cavities do not mediate the electron tranport between glucose oxidase and an electrode (Ryabov et al.) 257
Fluorescent dye
Studies on the kinetics of gramicidin channels in liposomes. Part I (Jyothi et al.) 297
Fusion
Effective production by electrofusion of hybridomas secreting monoclonal antibodies against Hc-antigen of *Salmonella* (Tsoneva et al.) 41
Implications of membrane interface structural forces in electropermeabilization and electrofusion (Rols, Teissié) 101

Glucose oxidase
Ferrocenes inside cyclodextrin cavities do not mediate the electron tranport between glucose oxidase and an electrode (Ryabov et al.) 257
Gramicidin
Studies on the kinetics of gramicidin channels in liposomes. Part I (Jyothi et al.) 297

Hc-antigen
Effective production by electrofusion of hybridomas secreting monoclonal antibodies against Hc-antigen of *Salmonella* (Tsoneva et al.) 41
Hemoglobin
Rapid oxidation and reduction of hemoglobin at a bifunctional dye of Janus Green modified electrode (Zhu, Dong) 23
Hepatocytes
A comparison between fusion of rat hepatocytes induced by electric and by centrifugal fields (Reynaud et al.) 33
Human amniotic epithelial cells
Evidence of a Na–H antiport and of Na–K–Cl cotransport in the membrane of human amniotic epithelial cells (Bara, Guiet-Bara) 361
Human serum
α-Amylase assay in human serum using a mediated amperometric enzyme electrode based on oligosaccharide dehydrogenase (Kinoshita et al.) 365
Humoral responsiveness
Humoral responsiveness of mice exposed to a 500 μT, 60 Hz magnetic field (Putinas, Michaelson) 371
Hybridomas
Effective production by electrofusion of hybridomas secreting monoclonal antibodies against Hc-antigen of *Salmonella* (Tsoneva et al.) 41
Hydrolysis
Electrochemical investigation of enzyme catalysed hydrolysis and synthesis of peptides using peptidyl-4-nitroanilides as substrates (Heiduschka, Dittrich) 231

Intramembrane electric fields
Intramembrane electric fields: a single charge, protein α-helix, photosynthetic reaction centre (Cherepanov, Krishtalik) 113
Ion conductor
An example of a working molecular charge sensitive ion conductor (Drain, Mauzerall) 263
Ionic composition
Ionic composition of the medium, surface potential and affinity of the membrane-bound chloroplast ATPase for its charged substrate ADP (Bizouarn et al.) 215
Ion release
Release of ions from large unilamellar vesicles by alamethicin and by melittin (Miller, Doll) 323

Janus Green
Rapid oxidation and reduction of hemoglobin at a bifunctional dye of Janus Green modified electrode (Zhu, Dong) 23

Lampito mauritii
Oscillatory bioluminescence of *Lampito mauritii* coelomocytes in pulsed dc electrolysis: oxygen controlled excited state production (Limaye, Santhanam) 249
Liposomes
Kinetics of liposome volume and permeability changes during the lipid phase transitions (Voinova et al.) 143
Studies on the kinetics of gramicidin channels in liposomes. Part I (Jyothi et al.) 297

Magnetic fields
Humoral responsiveness of mice exposed to a 500 μT, 60 Hz magnetic field (Putinas, Michaelson) 371
Malic acid
Electrochemical fixation of carbon dioxide in pyruvic acid to yield malic acid using malic enzyme as an electrocatalyst (Sugimura et al.) 241
Mediatorless peroxidase electrode
Mediatorless peroxidase electrode and preparation of bienzyme sensors (Kulys, Schmid) 305
Melittin
Adsorption of alamethicin and melittin on bare and phospholipid covered mercury electrodes (Miller, Doll) 129
Release of ions from large unilamellar vesicles by alamethicin and by melittin (Miller, Doll) 323
Membrane interface
Implications of membrane interface structural forces in electropermeabilization and electrofusion (Rols, Teissié) 101
Membrane proteins
Intramembrane electric fields: a single charge, protein α-helix, photosynthetic reaction centre (Cherepanov, Krishtalik) 113

Mercury
Adsorption of alamethicin and melittin on bare and phospholipid covered mercury electrodes (Miller, Doll) 129
Mice
Humoral responsiveness of mice exposed to a 500 μT, 60 Hz magnetic field (Putinas, Michaelson) 371
Monoclonal antibodies
Effective production by electrofusion of hybridomas secreting monoclonal antibodies against Hc-antigen of *Salmonella* (Tsoneva et al.) 41

NADH
Electrooxidation of NADH with $Co(phen)_3^{3+}$ by NADH dehydrogenase purified from *Bacillus stearothermophilus* (Matsue et al.) 347
Na,K-ATPase
Ion activation of the Na,K-ATPase in alternating currents (Blank, Soo) 51
Nonlinear dielectric properties
On the nonlinear dielectric properties of biological systems. *Saccharomyces cerevisiae* (Woodward, Kell) 83

Oligosaccharide dehydrogenase
α-Amylase assay in human serum using a mediated amperometric enzyme electrode based on oligosaccharide dehydrogenase (Kinoshita et al.) 365

Peptide bonds
Intramembrane electric fields: a single charge, protein α-helix, photosynthetic reaction centre (Cherepanov, Krishtalik) 113
Peptides
Electrochemical investigation of enzyme catalysed hdyrolysis and synthesis of peptides using peptidyl-4-nitroanilides as substrates (Heiduschka, Dittrich) 231
Peptidyl-4-nitroanilides
Electrochemical investigation of enzyme catalysed hydrolysis and synthesis of peptides using peptidyl-4-nitroanilides as substrates (Heiduschka, Dittrich) 231
Permeability
Implications of membrane interface structural forces in electropermeabilization and electrofusion (Rols, Teissié) 101
Kinetics of liposome volume and permeability changes during the lipid phase transitions (Voinova et al.) 143
Peroxidase
Mediatorless peroxidase electrode and preparation of bienzyme sensors (Kulys, Schmid) 305
Phase transitions
Kinetics of liposome volume and permeability changes during the lipid phase transitions (Voinova et al.) 143
Phospholipids
Adsorption of alamethicin and melittin on bare and phospholipid covered mercury electrodes (Miller, Doll) 129
Photosynthesis
Intramembrane electric fields: a single charge, protein α-helix, photosynthetic reaction centre (Cherepanov, Krishtalik) 113
Piroxicam
Electrooxidation and determination of the anti-inflammatory drugs Piroxicam and Tenoxicam at the carbon paste electrode (El-Maali, Hassan) 155
Platinum
Cyclic voltammetry studies of bilayer lipid membranes deposited on platinum by self assembly (Wardak, Tien) 1
Poration
On electroporation of cell membranes and some related phenomena (Review) (Tsong) 271
Prokaryotes
Clotting of donor DNA during electroporation of prokaryotes (Sabelnikov, Cymbalyuk) 313
Prothrombin fragment 2
Structural study of the adsorption dynamics of prothrombin fragment 2 at the electrode/solution interface (Lecompte, Azzouz) 13
Proton energization
Analysis of the energetics of ATP synthesis (Krishtalik) 335
Pulsed dc electrolysis
Oscillatory bioluminescence of *Lampito mauritii* coelomocytes in pulsed dc electrolysis: oxygen controlled excited state production (Limaye, Santhanam) 249
Pyrroloquinoline quinone
Voltammetric determination of acid dissociation constants of pyrroloquinoline quinone and its reduced form under acidic conditions (Kano et al.) 193
Pyruvic acid
Electrochemical fixation of carbon dioxide in pyruvic acid to yield malic acid using malic enzyme as an electrocatalyst (Sugimura et al.) 241

Rat hepatocytes
A comparison between fusion of rat hepatocytes induced by electric and by centrifugal fields (Reynaud et al.) 33

Saccharomyces cerevisiae
On the nonlinear dielectric properties of biological systems.
Saccharomyces cerevisiae (Woodward, Kell) 83

Salmonella
Effective production by electrofusion of hybridomas secreting monoclonal antibodies against Hc-antigen of *Salmonella* (Tsoneva et al.) 41

Self assembly
Cyclic voltammetry studies of bilayer lipid membranes deposited on platinum by self assembly (Wardak, Tien) 1

Sodium
Evidence of a Na–H antiport and of Na–K–Cl cotransport in the membrane of human amniotic epithelial cells (Bara, Guiet-Bara) 361

Sulphur
Structural study of the adsorption dynamics of prothrombin fragment 2 at the electrode/solution interface (Lecompte, Azzouz) 13

Surface potential
Ionic composition of the medium, surface potential and affinity of the membrane-bound chloroplast ATPase for its charged substrate ADP (Bizouarn et al.) 215

Tenoxicam
Electrooxidation and determination of the anti-inflammatory drugs Piroxicam and Tenoxicam at the carbon paste electrode (El-Maali, Hassan) 155

Thiouric acid
Electrochemical oxidation of uric acid and 6-thiouric acid (Goyal et al.) 355

Thymidine
Comparative studies on the adsorption and the association of thymine and thymidine at the charged interface (Kamal et al.) 165

Thymine
Comparative studies on the adsorption and the association of thymine and thymidine at the charged interface (Kamal et al.) 165

Transport systems
Evidence of a Na–H antiport and of Na–K–Cl cotransport in the membrane of human amniotic epithelial cells (Bara, Guiet-Bara) 361

Unilamellar vesicles
Release of ions from large unilamellar vesicles by alamethicin and by melittin (Miller, Doll) 323

Uric acid
Electrochemical oxidation of uric acid and 6-thiouric acid (Goyal et al.) 355

Yeast
Comparison between the behaviour of yeast and bacteria in a non-uniform alternating electric field (Asencor et al.) 203